

EPSC TSC Meeting

Welcome to Merseburg



Welcome to new TSC participants

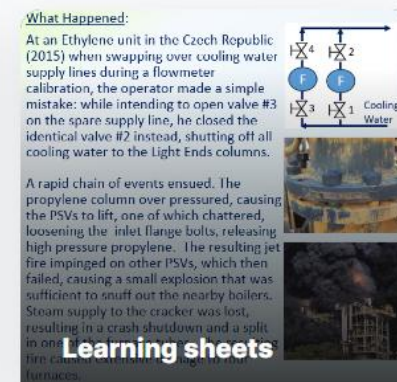


MOS team

- ▶ Conny Verleun: Office – main contact
- ▶ Gabriela Roelofsen: office – backup
- ▶ Kurt Metz: IT and main contact
- ▶ Gert van den Brink: contract
- ▶ Keith Wilson: financial admin
- ▶ Jolanda Scholten: communication
- ▶ Marith Haan: mailings
- ▶ Miranda Schouten: Events
- ▶ Janine Kooistra: Events
- ▶ Raymond Fifis: Director



Website



Aachen Dec 16&17 2025

Full members to register 4 people free
of charge: Coupon code "Aachen25"



Park Hotel Quellenhof
Reception Mo 15th at 20.00

Day 1 Program Aachen Process Safety congress - Tuesday December 16 2025				
Time	Europe Hall	Room K1	Room K2	
08.15	Registration & Network forum			
09.15	Tijs Koerts, EPSC - Welcome			
09.30	Fiona McLeod, University of Sheffield - legacy of the Bhopal incident			
10.30	Coffee break at Network Forum			
Session Chair	Learning from incidents Chair: Jean Godts	Operational Hazards Chair: Mark Scanlon	Chemical Hazards Chair: Hans Schwarz	
11.15	Pier-Jan Hettema, dsm-firmenich - Flixborough new learnings 5 decades after	Susanna Voges, Voovio - Human Factors in chemical operations - getting rid of operational errors for good	Markus Goedde, BASF - Storage of products – Chemical Hazard Assessment	
11.50	Jaco Nel, dsm-firmenich - Chemelot NAK2 incident in 1975	Simon-Mark Egan & Gilles Roman, Seynsqo - Misleading Safety Data Sheets	Stefan Drees, Bayer - Safe Use of Phosgene and Triphosgene in the Fine Chemicals Industry	
12.25	Bernd Hoppe, Arlanxeo - Incident learning from the Geleen site	Davor Jozepovic - MOL Group	Annik Nanchen, TuvSud - EPSC on Chemical Hazard Aassessment practices	
13.00	Lunch at Network Forum			
Session Chair	Digitalization & Modeling Chair: Pier-Jan Hettema	Mechanical Integrity Chair: Stefan Drees	Learning from incidents Chair: Eline Beulens	
14.00	Francesco Mezzino, Tecnimont - Computational Fluid Dynamics modelling during engineering EPC projects	Ankit Agarwal, Westlake - Measuring the unseen: A Methodology to Quantify Asset Integrity Program	Gus Carroll, Emperisis, TotalEnergies, Energy Institute - Incident data base to use for learning	
14.35	Angga Alimin, TUDelft - HAZOP by AI: implementatiuon route	John Cook, ABS group & ... Ashland - Damage Mechanism Assessment in Specialty Chemical Operations	Andreas Scholz, Vynova - Walk the line incidents	
15.10	Rainer Semmler, TuvSud - Acoustic testing and its support for process safety	Ryszard Hellebrand, Westlake - Asset integrity failings in process safety events	Randy Garabedian, Covestro	
15.45	Tea Break at Network Forum			
16.30	Mike Johnson, DNV - EPSC award winning lecture: 'Living with Risk: A Career in Process Safety and Explosions'			
17.30	Reception with drinks & finger food at the Network Forum			
19.30	End day 1			

Day 2 Program Aachen Process Safety congress - Wednesday December 17 2025				
Time	Europe Hall	Room K1	Room K2	
08.30	Registration & Network forum			
09.00	Panel discussion "Process Safety in current reality" Madelon Janssen (dsm-firmenich), George Wagner (Covestro), Geert Vercruysse (BASF), Martin de Zeeuw (LyondellBasell)			
10.00	Coffee break at Network Forum			
Session Chair	Process Hazard Analysis Chair: Rainer Hoss	Electrical Safety Chair: open	Energy Transition Hazards Chair: Stuart King	
10.45	Sandeep Patil, Martin Sotomayor, Bertram Wendt, BASF - Data transfer of Safety integrated Functions from PHA into specification sheets	Olivier Cardoen, Prohead & .. JNJ - Avoidig deflagration in an explosive atmosphere by static discharge	Karen van Tol & Dimitri Quist, RHDHV - Standardisation for green hydrogen production through water electrolysis	
11.20	Marco Turdor, HIMA - Trace It, Trust It: Making HAZOP & LOPA Work Together	Arjen de Koning, Yokogawa - Proof testing SIL loops	David Moore, AcuTech - Energy transition hazards	
11.55	Katy Gerstner & Florin Omota - Practical LOPA: A biofuels revamp study	Pieter Poldervaart, Cenosco - Improving SIS Auditability and Traceability through Digitization	James Birch, BakerRisk - There's no such thing as a free lunch energy source	
12.30	Lunch at Network Forum			
Session Chair	Critical Barrier Management Chair: open	TBD Chair: open	Process Safety Management Chair: open	
13.30	Dirk Roosendans, TotalEnergies - Critical Barrier Management Practices in TotalEnergies	Bart Aerts, Borealis - Flare Hazard Assessment	Andrew Derbyshire, ERM - Moving from Compliance Driven Safety to Intelligence Driven Risk Management	
14.05	Maha Al-Subaiei, Kuwait Oil Company - Safety Critical Element (SCE) identification at multiple facilities: Lessons Learned in KOC	Ultimo or Vysus Group	Margit Hahn - Evonik	
14.40	Risktec	DOW	Shafee Alawadhi, Kuwait Oil Company - Process Safety Auditing System, Lessons Learned in KOC	
15.15	Tea Break & Network Forum			
15.30	Tony Gower Jones (formerly Shell) - Learning from Incidents			
16.45	Close-out			

Rosengarten Mannheim Dec 15&16 2026



IPSD

New movies 😊
Summit Media

Three topics 30 min:

1. NAK 2 Geleen incident Jaco Nel (dsm-firmenich)
2. Critical Barrier Management – Dirk Roosendans (Total Energies)
3. Walk the Line Incidents – Andreas Scholz (Vynova)



INTERNATIONAL
**PROCESS
SAFETY
DAY**



December 2, 2025

Join us for Process Safety Day to recognize our achievements in attaining excellence in process safety!

We invite you to participate in this day-long observance, filled with engaging activities and educational opportunities that will enhance our commitment to process safety. This day long program will remain available virtually until December 1, 2026!

PROGRAM & ACTIVITIES

WEBINARS

Renowned industry experts will share their insights and experiences on process safety management, best practices, and the latest trends

PANEL DISCUSSIONS

Engage in thought-provoking conversations with a diverse panel of professionals, exchanging ideas and discussing the challenges and solutions in maintaining a safe work environment.

CASE STUDIES

Discover real-life examples of process safety



Big Data Frankfurt – Nov 11 & 12

AI
Robotization
Digital Tools

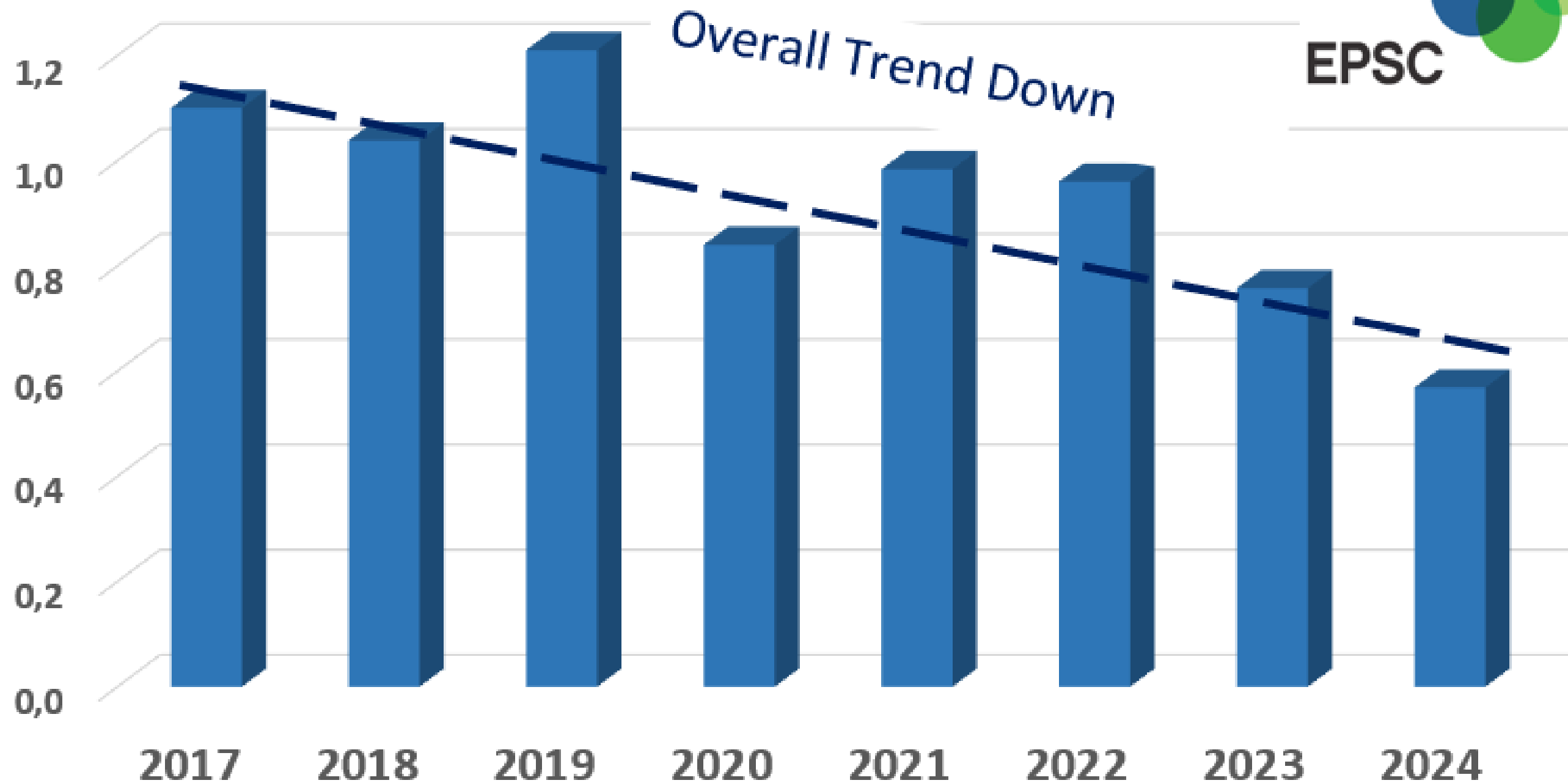


Registration Coupon code:

Process Safety Incident Rate - per million hours



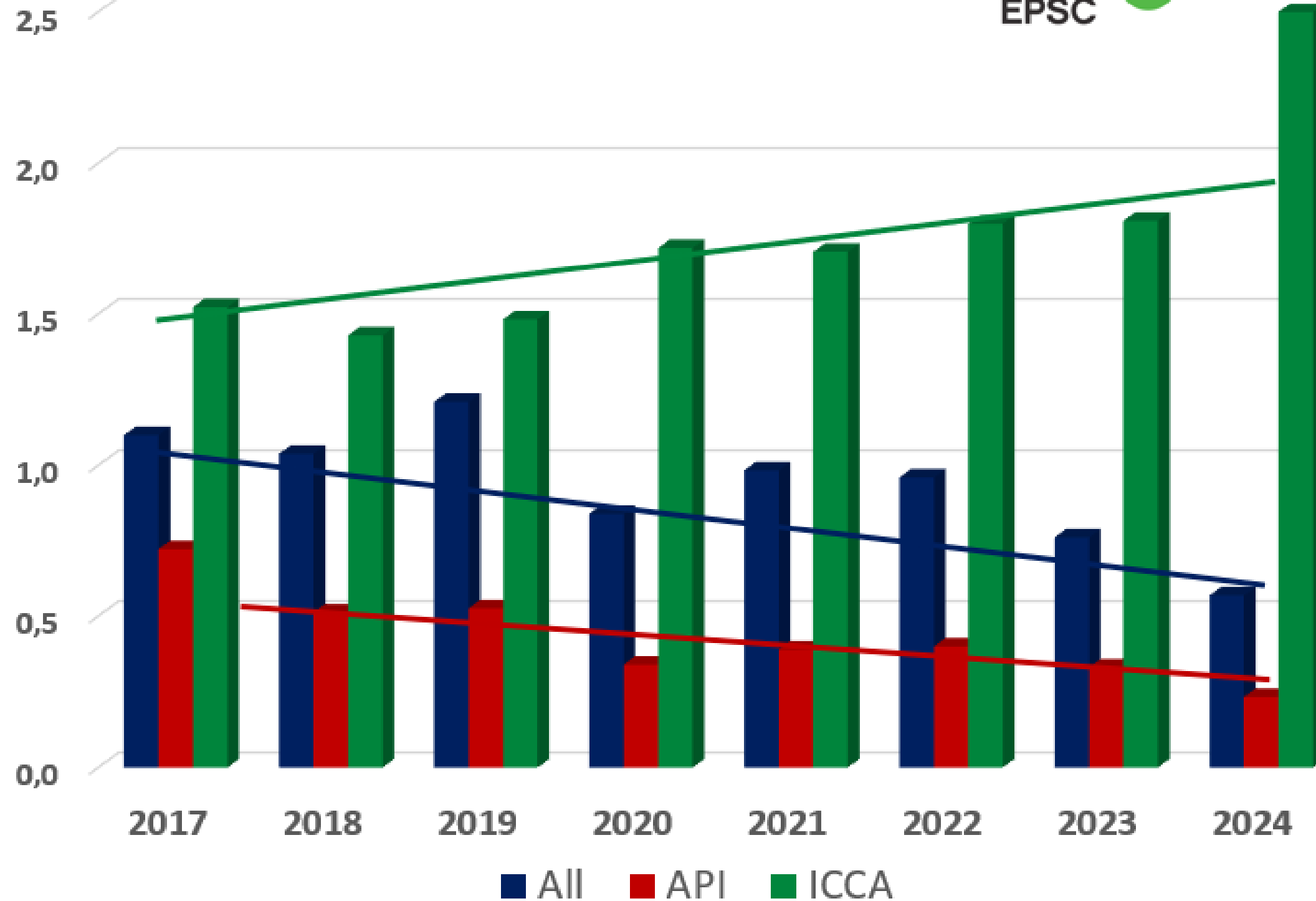
EPSC



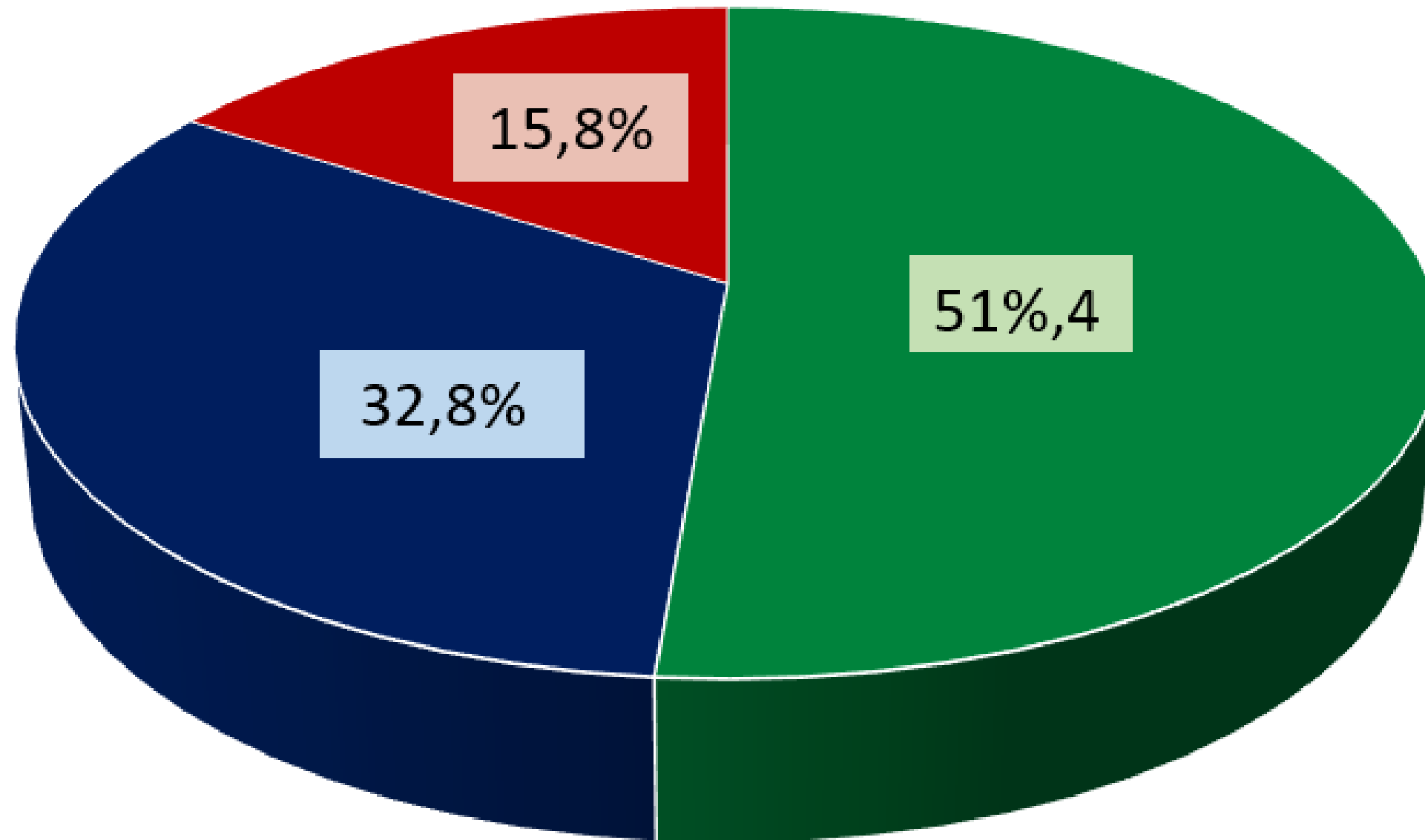
PSE rate per million hours



EPSC

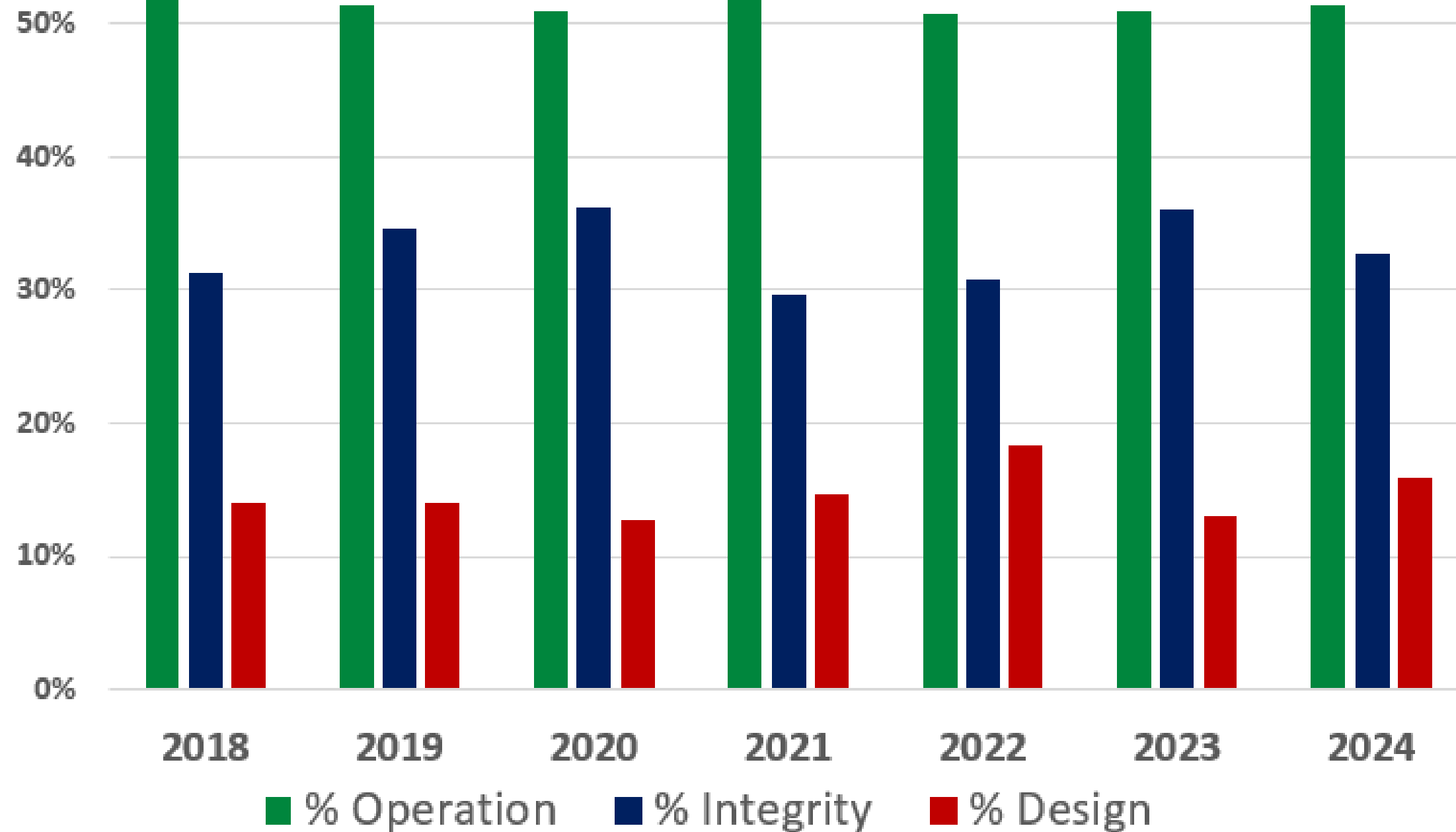


Main Cause 2024 (1063 cases)



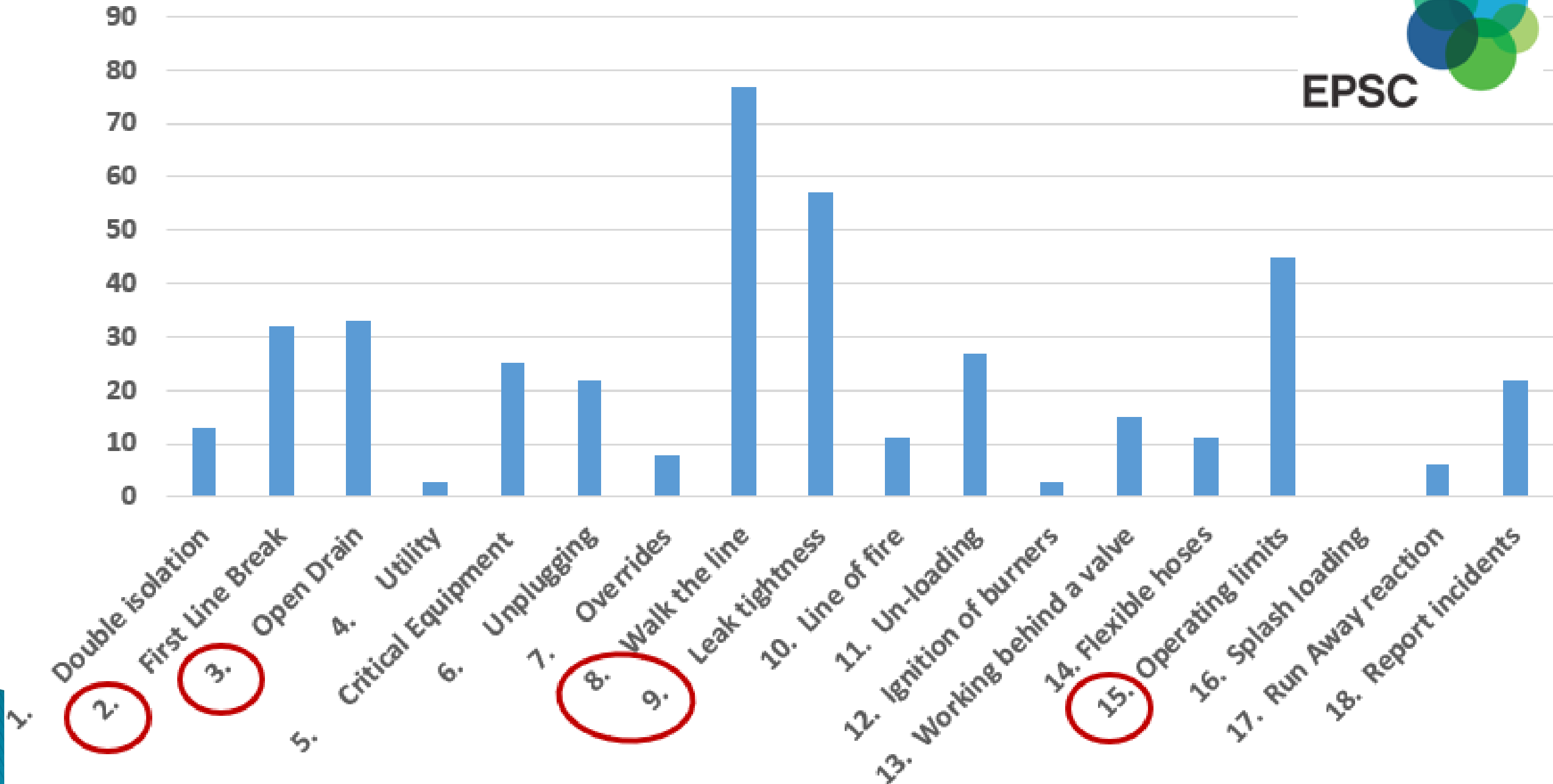
■ Operations ■ Integrity ■ Design

Main Root Cause



23 companies reported on PSF with total 410 PSF contributions

Statistics on EPSC Process Safety Fundamentals





Day 1, Tuesday Oct 7			Presenter
	12.00	Connect with an easy lunch	
	13.00	EPSC Update	Tijs Koerts (EPSC)
	13.30	Learning Event 1: fire at a Crude Destillation Unit	Devecseri Máté Tamás (MOL Group)
	14.00	Learning Event 2: Covestro	Randy Garabedian (Covestro)
	14.30	Learning Event 3: Akaba Chlorine release incident	Tijs Koerts (EPSC)
	15.00	Break	
	15.30	Process Safety Fundamentals in Design	Dirk Roosendans (TotalEnergies)
	16.00	PSM at Leuna + site Introduction	David Doyonnas (TotalEnergies)
	16.30	Leave for Leuna Refinery - By Bus	
	17.00	Arrive at the Leuna site with bus tour (1.5 hr)	David Doyonnas (TotalEnergies)
	19.00	Arrive at Schloss Merseburg with tour	
	20.00	Reception at Schloss Merseburg	
	20.30	Dinner at Schloss Merseburg	

EPSC TSC Meeting

Welcome to Merseburg Day 2

Logistics – Board



Day 2, Wednesday Oct 8			
09.00	Welcome Day 2		Tijs Koerts (EPSC)
09.10	Dust Explosions: Turkey, Telangana, Texas Skyland		Dan Benton / Eline Beulens
09.50	Community relation management		Devecseri Máté Tamás (MOL Group)
10.30	Break		
11.00	Use of Bow-Ties tool in TE to monitor critical barriers		Dirk Roosendans (TotalEnergies)
11.45	Black-out open discussion		
12.15	Update on progression of a PSM ISO standard		Richard Hellebrand (Westlake)
12.30	Lunch		
13.30	Evaluation of reactive hazards on a production site		Annik Nanchen (Tuv Sud)
14.15	Work Group updates		
15.00	End		

EPSC Board

Break 12.20 – 13.20

Next

- ▶ PS Fundamentals for design
- ▶ PSM in Leuna with site visit



Break 15.00 – 15.



- ▶ Next: Learning events
- ▶ Effective learning from incidents (Cargill)
- ▶ PHA revalidation (Discussion)

Update working groups

- CHA – Annik Nanchen
- Auditing – Hans Schwarz
- Pharma – Dan Benton
- Critical Barrier Management – Dirk Roosendans
- Energy Transition – Dirk Roosendans
- RAST users group – Tijs Koerts
- Webinars – Tijs Koerts
- Fluor Free Foams for Fire Fighting



Auditing

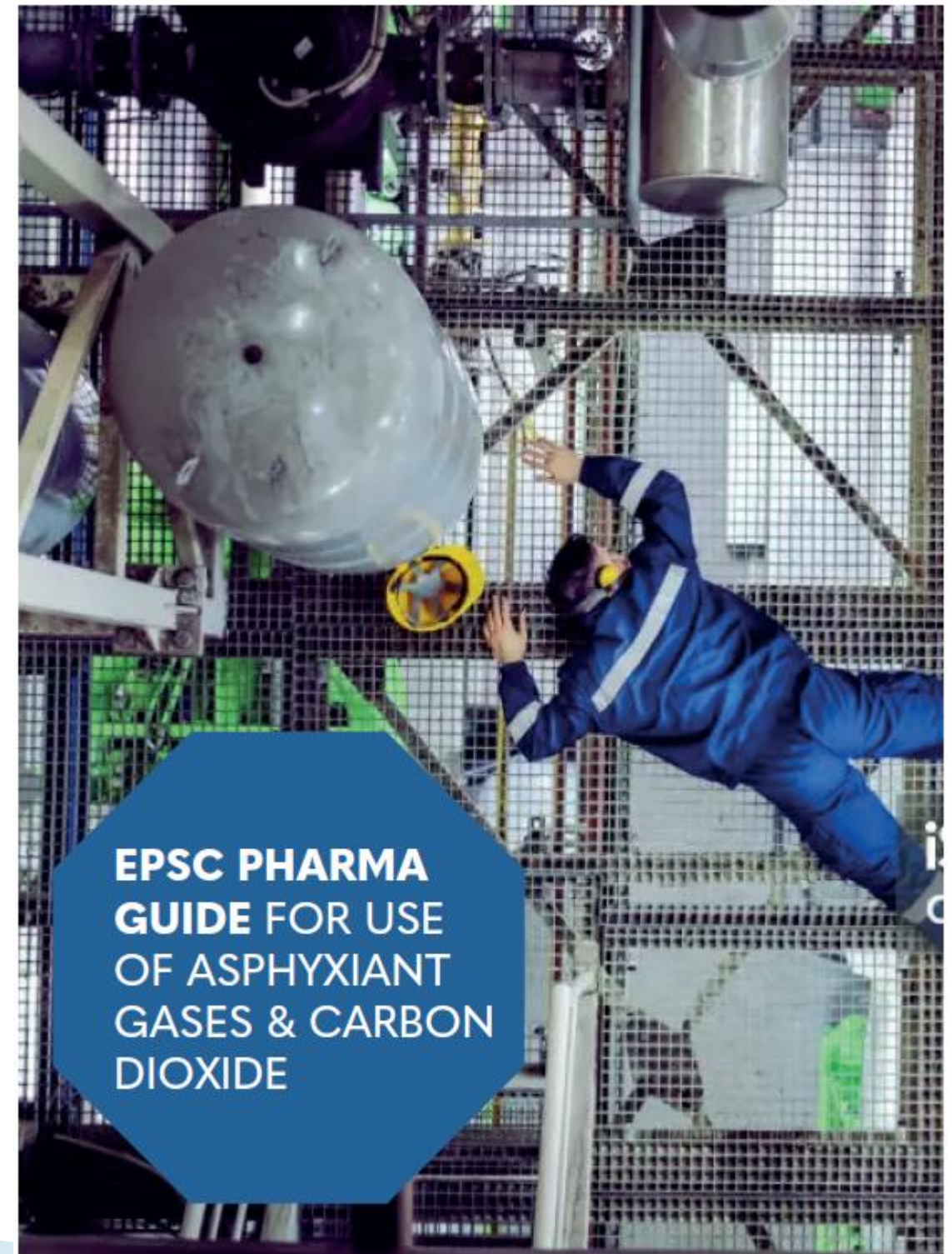
- ▶ Well started



Pharma Group

Dan Benton (GSK)

Booklet Printed
Being translated (Fr, It, Sp)



CHA Chemical Hazard Analysis

Annik Nanchen (Tuv Sud)



New Hazards from Energy Transition & Renewables

Webinars
ongoing

Focus topics to work on



1	Roger	Stokes	BakerRisk
2	Thomas	Arndt	Borealis
3	Evelien	Bos-Steur	DOW
4	Antonio	Mangini	Eni
5	Tijs	Koerts	EPSC
6	New person?		ExxonMobil
7	Moritz	Koch	Linde AG
8	Philippe	Voisin	LyondellBasell
9	New person?		Mol
10	David	Montgomery	MSD
11	Kirsi	Kavonius-Hietanen	Neste
12	Julia	Di Domenico Pinto	Neste
13	Iulian	Marin	OMV Petrom
14	Hans	Schwarz	Prosafex
15	Peter	Winkelman	RHDHV
16	Paul	Hail	Saudi Aramco
17	Esta	de Goede	Sitech
18	Serena	Portella	Stahl
19	Maurizio	Rigolio	Tecnimont
20	Timo	Heene	BASF
21	Markus	Goedde	BASF
22	Dirk	Roosendans	TotalEnergies
23	Andreas	Scholz	Vynova
24	Ksenia	Zakariyya	Yara
25	Alisson	Hu	LYB

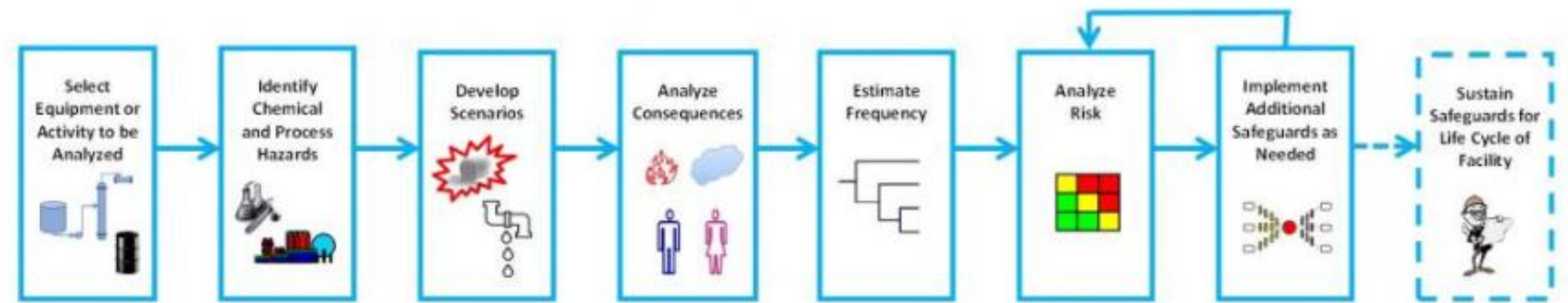
Critical Barrier Manager

Bertram	Wendt	BASF
<i>Randy</i>	<i>Garabedian</i>	<i>Covestro</i>
Tijs	Koerts	EPSC
David	Kelly	ExxonMobil
André	Ritter	Linde
Moritz	Koch	Linde
Michael	Schön	Syngenta
Dirk	Roosendans	TotalEnergies
Clement	Enault	TÜV SÜD
Dimos	Tsakiris,	Aramco
Hakam Ahmad	AlOutaibi	KOCKW
Pierre	Grino	Seynsqo
Luis María	Fernandez	Repsol
Irene	CARRETERO P	Repsol
Lisa Scodari		BASF
Geert Vercruysse		BASF
Matej	Danko	Vurup
Udo	Dehner	DSM
Michaela	svorenova	Slovnaft
Danko	Matej	Vyrup
Alexander	Borggreve	Vynova



RAST & CHEF users group

- Web training (10 sessions) on CHEF
 - For all process engineers, safety specialists
 - Free for employees from EPSC members
 - Ken First & Bruce Vaughan (former DOW)



Fluor Free Foams for fire fighting

- ▶ Sharing practical aspects
- ▶ Eric Paillier (TotalEnergies)
- ▶ How much interest?



Process Safety Leadership / Culture

- ▶ We took a break
- ▶ Interest?



TSC Rotterdam April 21&22



LyondellBasell
Eastman
Exxon
Nouryon
Shell
Neste
Lanxess
Covestro
etc.



Thank you for your active participation!



- Minutes with presentations to become available
- Your feedback & input is valuable to us
- Recycle your Badge

Back-up slides

Learning sheets

Collapsed Railway Tank

EPSC Learning Sheet November 2025

EPSC



What Happened:

A railway tank containing butane, collapsed during a cold night.

Aspects:

- Below the butane boiling point of $-0,5\text{ }^{\circ}\text{C}$ the pressure in the closed railway tank becomes below atmospheric: 0,72 bar at $-15\text{ }^{\circ}\text{C}$ and 0,57 bar at $-20\text{ }^{\circ}\text{C}$.
- Although the metal looks strong, the force (F) can be high due to the large surface area (A) : $F = dP \times A$.
- The inherent safe solution is to design and built the tanks full vacuum resistant (thicker wall).
- Vacuum breakers are not ideal as they let in oxygen that can react with butane.
- Other solutions are to maintain a certain temperature (add heat). In an emergency: inject an inert gas.

Avoid that tanks collapse due to low ambient temperature

Manfredonia Arsenic release

EPSC Learning Sheet December 2025

EPSC



What Happened:

At a petrochemical plant, an ammonium column exploded in 1976, releasing 39 tons of Arsenic. Despite fatalities and dead animals, the incident was initially downplayed. The impact of fall out Arsenic affected 15 km² impacting soil and water. Human diseases like skin and lung cancer appeared over time.



Only in 1989 the Manfredonia town area was classified as “high environmental crisis risk” under Italian law.

Aspects:

- A court trial 1996-2007 investigated the legal responsibility of plant managers and the consequences for inhabitants.
- Legislation and control was established due to the incident, later leading to the European Seveso Directive.
- Manfredonia economy suffered severely as food and fish from the area were banned. The Chemical plant was hated by society as it took away their health, their economy and their food. The plant was closed in 1990, but the environmental pollution largely remains.
- Involve near by communities on high hazard scenarios and prepare them for emergencies.

Act appropriate on chemical releases

Board status

- ▶ Eline Beulens to leave
- ▶ Randy Garabedian: interim Chair of the board at least until Spring TSC
- ▶ Michael Schoen and Antonio Mangini have left
- ▶ Dirk Roosendans committed to stay
- ▶ Pier-Jan Hettema, Martin de Zeeuw & David Kelly
- ▶ Hans Schwarz & Rainer Hoss – added by board
- ▶ Lobby at Aramco and BASF (Looks good)

Budget Structure & Prep 2026

Expenses	Budget 2024	Actual 2024	Budget 2025
DECHEMA fee (until April 1)	90.000 €	90.000,00 €	22.500 €
EPSC Office support new			70.000 €
Transition Office - one time			30.000 €
Benchmark study (Fee KC)	22.000 €	22.000,00 €	25.000 €
TSC Organisation (Fee KC)	22.000 €	22.000,00 €	25.000 €
Learning sheets (Fee KC)	22.000 €	22.000,00 €	25.000 €
New members (Fee KC)	22.000 €	22.000,00 €	25.000 €
Board support (Fee KC)	22.000 €	22.000,00 €	25.000 €
Working Groups support (Fee KC)	51.282 €	50.820,00 €	57.240 €
Supporting cost (KC traveling etc)	12.000 €	10.026,01 €	8.000 €
Office, Legal, Tax, incl. fin. charges	13.000 €	11.839,56 €	10.000 €
TSC & Board Meeting	20.000 €	25.616,83 €	25.000 €
EPSC promotion materials	15.000 €	2.648,65 €	5.000 €
Working Group costs	20.000 €	5.823,67 €	10.000 €
EPSC New Projects (Movies, Booklet)	25.000 €	23.365,42 €	25.000 €
Other / Unforseen	2.000 €	1.202,22 €	2.000 €
Conference Cost, incl. fin. charges	130.000 €	102.149,72 €	100.000 €
Conference Organization cost	30.000 €	32.250,00 €	35.000 €
Conference Reception	15.000 €	5.573,50 €	10.000 €
International PS Week	25.000 €	18.974,97 €	5.000 €
Total Expenditures	558.282 €	490.290,55 €	539.740 €
Income	Budget 2024	Actual 2024	Budget 2025
Member Fees	460.000 €	466.000,00 €	450.000 €
Big Data Conf. Revenue	5.000 €	7.683,49 €	5.000 €
EPSC European Conference	110.000 €	75.025,12 €	80.000 €
Interest current assets / term account		5.042,70 €	8.000 €
Total Income	575.000 €	553.751,31 €	543.000 €
Income minus Expenses	16.718 €	63.460,76 €	3.260 €

EPSC Budget		Budget 2025	Actuals 2025	Actuals 2024 (concept)	Budget 2024
Income					
Fee Full Members		€ 450.000	€ -	€ 466.000	€ 460.000
Fee Associate Members		€ -	€ -	€ -	€ -
Other income		€ 5.000	€ -	€ 5.000	€ 5.000
EPSC Conference income		€ 80.000	€ -	€ 75.025	€ 110.000
Total income		€ 535.000	€ -	€ 546.025	€ 575.000
Expense					
Office / Legal					
Office support		€ 117.500	€ -	€ 112.000	€ 112.000
Operation & legal costs		€ 20.000	€ -	€ 22.408	€ 27.000
Technical / Content					
TSC costs		€ 37.500	€ -	€ 34.808	€ 32.000
Working Groups		€ 67.240	€ -	€ 56.644	€ 71.282
Board costs		€ 12.500	€ -	€ 12.808	€ 10.000
Benchmark studies		€ 25.000	€ -	€ 22.000	€ 22.000
Marketing & Projects					
Communication & Marketing		€ 30.000	€ -	€ 24.649	€ 37.000
Member support / recruitment		€ 25.000	€ -	€ 22.000	€ 22.000
EPSC projects		€ 25.000	€ -	€ 23.365	€ 25.000
Tansition office (project)		€ 30.000	€ -	€ -	€ -
Special activities					
EPSC Conference		€ 145.000	€ -	€ 139.453	€ 175.000
Other activities		€ 5.000	€ -	€ 18.975	€ 25.000
Total costs		€ 539.740	€ -	€ 489.111	€ 558.282
Result		€ -4.740	€ -	€ 56.914	€ 16.718

working groups



- CHA – Annik Nanchen & PJ Hettema
- HAZOP efficiency – output PJ Hettema
- Energy Transition – Dirk Roosendans
- CHEF users group – PJ Hettema
- Fluor Free Foams for Fire Fighting – TE
- Critical Barrier Management – Dirk Roosendans
- Leadership – Michael Schoen + PJ Hettema
- Auditing – Hans Schwarz
- Pharma – Dan Benton